

**Notice of Allowability**

Application No.

10/691,568

Applicant(s)

LEE, WOO-HYOUNG

Examiner

Greg F. Cunningham

Art Unit

2624

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/20/2007.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

### **DETAILED ACTION**

1. This action is responsive to amendment filed 12/20/2007.
2. The disposition of the claims is as follows: claims 1 - 14 are pending in the application. Claims 1, 7 and 13 are independent claims. Claims 13 and 14 were previously allowed.

### ***Claim Rejections - 35 USC § 102 and 103***

3. In view of amended claims and review of cited references and remarks, 102 and 103 rejections are withdrawn.

### ***Allowable Subject Matter***

4. Claims 1 - 14 are allowed.
5. The following is an examiner's statement of reasons for allowance:  
  
Applicant's independent claims 1 and 7 stand novel over the related prior art. For example, the related art of Nakayama, Keisuke et al. (European Patent EP 1265121 A2), does make use of fingerprint data of 1a plurality of fingers of the same person for authentication; while the related art of Fujieda (US 2003/0044051 A1), where a fingerprint image input device comprises an image input unit that sequentially acquires a plurality of fingerprint images of a finger pressed against a detector surface, a color detection unit that detects a color of the finger in synchronization with the input of the plurality of fingerprint images; and finally there is Riganati et al., (US 4,151,512) that provides for an automatic system wherein pattern representations of epidermal ridges, such as fingerprints, are uniquely described by the automatic extraction of specific information. The specific information, such as ridge contour data, describing the ridge

flow in the fingerprint pattern, and minutia data, principally describing ridge endings and bifurcations, are automatically identified and extracted from the fingerprint pattern. Topological data identifying singularity points, such as tri-radial and cores as well as ridge flow line tracings related to those identified singularity points, are automatically extracted from the ridge contour data. The extracted information is then utilized by the system to automatically perform classification of the fingerprint pattern and/or matching of the fingerprint pattern with patterns stored in a mass file. Identification is then automatically achieved by comparing the extracted information with the information stored in the mass file, corresponding to previously identified fingerprint patterns. In a verification system, the claimed identity of an individual may be verified by matching the fingerprint of that individual with a particular pattern which is stored in the mass file according to the claimed identity.

However Keisuke, Fujieda nor Riganati disclose a system using fingerprints, comprising: a fingerprint scan part creating a fingerprint image when a finger contacts the fingerprint scan part; a fingerprint image storing part storing representative reference fingerprint images for at least two fingers of a user and at least one auxiliary reference fingerprint image for registered users; and a control part determining whether one of the representative reference fingerprint images matches a first input fingerprint image input through the fingerprint scan part, reading auxiliary reference fingerprint images corresponding to a matching representative reference fingerprint image, and comparing other fingerprint images input after the first input fingerprint image with the auxiliary reference fingerprint images to determine user authentication as claimed in independent claim 1, nor a security method using fingerprints, comprising: storing representative reference fingerprint images and at least one auxiliary reference fingerprint image,

according to registered users; receiving a first input fingerprint image for authentication of a user; determining whether one of the stored representative reference fingerprint images matches the first input fingerprint image; reading auxiliary reference fingerprint images corresponding to a matching representative reference fingerprint image; receiving additional fingerprint images sequentially input by the user; and determining whether the user is authenticated by respectively comparing the additional input fingerprint images with the corresponding auxiliary reference fingerprint images as claimed in independent claim 7.

Therefore as claimed by the combined elements of independent claims 1 and 7, the cited references and prior art of record lack separately and in combination the elements of said claims.

Claims 2-5 and 8-11 depend from allowable independent claims 1 and 7, respectively, and therefore are also allowed.

Reasons for allowance for claims 13 and 14 were given in a prior office action.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Responses***

7. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires to fax a response, (703) 872-9306 may be used for formal communications.

*Inquiries*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-7784.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).




Greg Cunningham

Examiner, Art Unit 2624

gfc

1/31/2008



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